

Claims

What is claimed is:

- 1 1. A multi-composition stick product, comprising:
 - 2 (a) a container having walls, an exterior contour, and an interior contour; and
 - 3 (b) a molded stick composition disposed so as to contact the walls of the
 - 4 container and be advanceable in the container, the stick composition comprising:
 - 5 (i) a first composition; and
 - 6 (ii) a second composition;
 - 7 wherein the first and second compositions differ by at least one component and the
 - 8 compositions are arranged in a predetermined non-random pattern that is reproducible.
- 1 2. The multi-composition stick product in accordance with claim 1, wherein the interior
- 2 and exterior contours of the container are different.
- 1 3. The multi-composition stick product in accordance with claim 1, wherein the
- 2 component is a medicament, colorant, fragrance, flavorant, sunscreen, preservative,
- 3 conditioner, moisturizer, emollient, or surfactant.
- 1 4. The multi-composition stick product in accordance with claim 3, wherein the
- 2 component is a colorant.
- 1 5. The multi-composition stick product in accordance with claim 4, wherein the
- 2 compositions form a predetermined discrete multicolor image.
- 1 6. The multi-composition stick product in accordance with claim 5, wherein the image
- 2 is a heart; evergreen tree; ying-yang; 5-pointed star; 6-pointed star; sun; circle; half and half
- 3 circle; heart with an arrow; lateral stripes; diagonal stripes (barber pole); longitudinal stripes;
- 4 happy face; sad face; tree; crescent moon; cross; 4-pointed star; flower; ellipse; wave;

5 lightening bolt; pinwheel; flag; lips; one or more alphanumeric letters; any other geometric
6 shape; or any combination thereof.

1 7. The multi-composition stick product in accordance with claim 5, wherein the stick
2 composition has a longitudinal axis and for at least a portion thereof, each cross-section
3 perpendicular to the longitudinal axis of the composition contains the same multicolor image.

1 8. The multi-composition stick product in accordance with claim 1, wherein the stick
2 composition is for topical application to an animal in need thereof.

1 9. The multi-composition stick product in accordance with claim 8, wherein the stick
2 composition is lip balm, lipstick, lip gloss, sunscreen stick, or deodorant.

1 10. The multi-composition stick product in accordance with claim 8, wherein the stick
2 composition comprises a pharmaceutically acceptable vehicle.

1 11. The multi-composition stick product in accordance with claim 9, wherein the stick
2 composition further comprises a medicament, a sunscreen, a preservative, a flavorant, a
3 fragrance, a colorant, a conditioner, a moisturizer, an emollient, a cleansing agent, an
4 antioxidant, an antistatic agent, a stabilizer, a pH adjuster, a surfactant, or any combination
5 thereof.

1 12. A multi-color stick product, comprising:

2 (a) a container having walls; and

3 (b) a molded multi-color stick composition disposed so as to contact the walls
4 of the container and be advanceable in the container, the stick composition comprising:

5 (i) a first composition; and

6 (ii) a second composition;

7 wherein the first and second compositions differ in color and are arranged in a predetermined
8 non-random image that is reproducible.

1 13. The multi-color stick product in accordance with claim 12, wherein the stick
2 product is a lip balm.

1 14. A method for manufacturing a multi-composition stick product advanceable from
2 an open end of a container, the method comprising the steps of:

3 inserting a mold shaft into the container;

4 dispensing a first composition of stick composition into the container around the
5 mold shaft;

6 removing the mold shaft from the container to form a cavity; and

7 filling at least a portion of the cavity with a second composition of stick
8 composition, the first and second compositions differing by at least one component and being
9 arranged in a predetermined non-random pattern that is reproducible.

1 15. The method in accordance with claim 14, wherein the inserting step comprises
2 inserting a portion of a first filling nozzle into the container, the first filling nozzle including
3 a first mold shaft having a first predetermined shape and a first outer barrier disposed about at
4 least a portion of the first mold shaft.

5 16. The method in accordance with claim 15, wherein the dispensing step comprises
6 dispensing the first composition of stick composition into a passageway, defined between the
7 outer surface of the first filling nozzle and the inner surface of the first outer barrier, and into
8 the container around the mold shaft.

1 17. The method in accordance with claim 16, wherein the first mold shaft is hollow.

1 18. The method in accordance with claim 17, wherein the filling step comprises
2 dispensing the second composition of stick composition through the first mold shaft and into
3 the container so as to fill at least a portion of the cavity.

1 19. The method in accordance with claim 16, wherein the first mold shaft is solid or
2 semi-hollow.

1 20. The method in accordance with claim 19, wherein the filling step comprises
2 dispensing, using a second filling nozzle having a second hollow mold shaft of a second
3 predetermined shape, the second composition of stick composition into the second mold shaft
4 so as to fill at least a portion of the cavity.

1 21. The method in accordance with claim 14, wherein the dispensing step comprises
2 dispensing the first composition of stick composition into the container around the mold shaft.

1 22. The method in accordance with claim 14, further comprising the step of finishing
2 the top surface of the stick composition while disposed in the container.

1 23. The method in accordance with claim 22, wherein said finishing step comprises
2 scraping the top surface of the stick composition with a heated scraper.

1 24. The method in accordance with claim 22, wherein said finishing step comprises
2 glazing the top surface of the stick composition.

1 25. The method in accordance with claim 14, wherein the component is a medicament,
2 colorant, fragrance, flavorant, sunscreen, preservative, conditioner, moisturizer, emollient, or
3 surfactant.

1 26. The method in accordance with claim 25, wherein the component is a colorant.

1 27. The method in accordance with claim 26, wherein the first and second compositions
2 are arranged as a discrete predetermined non-random multi-color image that is reproducible.

1 28. The method in accordance with claim 27, wherein for at least a portion of the
2 composition stick, each cross-section in a direction perpendicular to the longitudinal direction
3 of the composition stick has the same image.

4 29. The method in accordance with claim 14, wherein substantially no mixing occurs
5 at the interface between the first and second compositions.

1 30. The method in accordance with claim 14, wherein the stick product is a lip balm.

1 31. The method in accordance with claim 14, wherein the dispensing step comprises
2 dispensing the first composition of stick composition onto a support tray by which the container
3 is held so that the first composition spills into the container around the mold shaft.

1 32. The method in accordance with claim 31, wherein the filling step comprises
2 dispensing the second composition of stick composition onto the support tray so that the second
3 composition spills into the container and fills at least a portion of the cavity.

1 33. The method in accordance with claim 32, wherein the removing step further
2 comprises finishing the top surface of the first composition.

1 34. The method in accordance with claim 14, further comprising the step of removing
2 excess first and second compositions from the support tray.

1 35. A method for manufacturing a multi-composition stick product advanceable from
2 an open end of a container, the method comprising the steps of:
3 dispensing a first composition of stick composition into the container;
4 inserting a mold shaft into the container so as to displace the first composition
5 therein;
6 removing the mold shaft from the container to form a cavity; and

7 filling at least a portion of the cavity with a second composition of stick
8 composition, the first and second compositions differing by at least one component and being
9 arranged in a predetermined non-random pattern that is reproducible.

1 36. A system for manufacturing a multi-composition stick product in a container having
2 an inner contour and an outer contour, the stick product including a stick composition
3 comprising a first composition and a second composition, the first and second compositions
4 differing by at least one component and being arranged in a predetermined non-random pattern
5 that is reproducible, comprising:
6 a filling nozzle comprising:
7 a mold shaft insertable into the container;
8 an outer barrier disposed about at least a portion of the mold shaft so as
9 to form a passageway between the outer barrier and the mold shaft for receiving the first
10 composition.

1 37. The system in accordance with claim 36, wherein the mold shaft is solid or semi-
2 hollow.

1 38. The system in accordance with claim 36, wherein the mold shaft is hollow.

1 39. The system in accordance with claim 36, wherein the inner and outer contours of
2 the container differ in shape.

1 40. The system in accordance with claim 36, wherein the outer barrier is a ring
2 disposed about the mold shaft.

1 41. The system in accordance with claim 36, wherein the mold shaft and the inner
2 contour of the container differ in shape.

1 42. The system in accordance with claim 36, wherein the mold shaft and the outer
2 barrier are of equal length in a longitudinal direction.

1 43. The system in accordance with claim 36, wherein the mold shaft extends beyond
2 the outer barrier in a longitudinal direction.

1 44. A system for simultaneously manufacturing a plurality of multi-composition stick
2 products in a plurality of containers, each stick product including a stick composition
3 comprising a first composition and a second composition, the first and second compositions
4 differing by at least one component and being arranged in a predetermined non-random pattern
5 that is reproducible, comprising:

6 a support tray having a plurality of holes defined therein for receiving the plural
7 containers;

8 a holding member; and

9 a plurality of interchangeable filling nozzles, each filling nozzle being secured
10 to the holding member by an associated releaseable locking member, and each filling nozzle
11 comprising:

12 a mold shaft insertable into an associated container;

13 an outer barrier disposed about at least a portion of the mold shaft so as
14 to so as to form a passageway between the mold shaft and outer barrier for receiving the first
15 composition.

1 45. The system in accordance with claim 44, wherein the releaseable locking member
2 is a pin, clip or clamp.

1 46. A multi-composition stick product prepared by the method of claim 14.

1 47. A system for manufacturing a multi-composition stick product in a container having
2 an inner contour and an outer contour, the stick product including a stick composition
3 comprising a first composition and a second composition, the first and second compositions

4 being dispensed simultaneously, differing by at least one component and being arranged in a
5 predetermined non-random pattern that is reproducible, comprising:
6 a first filling nozzle for dispensing the first composition;
7 a second filling nozzle for dispensing the second composition; and
8 a securing mechanism for connecting the first and second filling nozzles, the
9 assembled first and second filling nozzles being insertable into the container.

1 48. A method for manufacturing a multi-composition stick product using the system
2 in claim 47, wherein said filling nozzles and said container are rotated independently of one
3 another.

1 49. A system for manufacturing a multi-composition stick product advanceable from
2 a container, comprising:
3 a cork screw shaped mold shaft adapted so as to be received in said container.

1 50. A method for manufacturing a multi-composition stick product advanceable from
2 a container having an inner contour, comprising the steps of:
3 inserting a cork screw shaped mold shaft into the container, said mold shaft
4 including a plurality of spiral revolutions;
5 dispensing a first composition of stick composition into the container between
6 the spiral revolutions of the mold shaft;
7 rotating while removing the mold shaft from the container to form a spiral cavity
8 about a perimeter of the inner contour of the container; and
9 filling at least a portion of the spiral cavity with a second composition of stick
10 composition, the first and second compositions differing by at least one component and being
11 arranged in a predetermined non-random pattern that is reproducible.